Page 3, line 6, change "in one go" to --at once--.

Page 5, line 15, insert:

--SUMMARY OF THE INVENTION--

Page 9, before line 7, insert:

--BRIEF DESCRIPTION OF THE DRAWINGS--.

after line 22, insert:

--DETAILED DESCRIPTION OF THE INVENTION--.

Page 10, line 27, change "in one go" to --at once--.

Page 16, line 23, change "Whilst" to --While--.

IN THE CLAIMS:

Please amend the claims as follows:

1. (Amended) A lithographic projection apparatus comprising:

an illumination system for supplying a projection beam of radiation;

a first object table for holding [patterning means] a projection beam patterning structure capable of patterning the projection beam according to a desired pattern;

a second object table for holding a substrate having a surface to be exposed, such that, when held on the table, the said surface lies in a reference plane;

a projection system [for imaging] which images the patterned beam onto a target portion of the substrate; and

a positioning system [for moving] which moves said second object table between an exposure position, at which said projection system can image said patterned beam onto said substrate, and a measurement position; [characterized by:]

a calibration system [for measuring] to measure lateral displacements of a reference point in a plane of said second object table as a function of tilt, at said measurement position, wherein said calibration system comprises:

a diffraction grating mounted to said second object table;

[illuminating means for generating] an illuminator which generates a measurement beam of radiation and [directing] directs it to be incident on said diffraction grating so as to be diffracted thereby; and

a detector [for detecting] which detects the position of said diffraction grating.

2. (Amended) Apparatus according to claim 1 wherein said diffraction grating is an at least partially transmissive diffraction grating and said calibration system further comprises a light guide [for directing] which directs said measurement beam to be incident on said diffraction grating in a direction substantially independent of the tilt of said second object table.

3. (Amended) Apparatus according to claim 1[ or 2], wherein said calibration system is constructed and arranged [for measuring] to measure displacements of a reference point in said reference plane and said diffraction grating is mounted substantially parallel to said reference plane on said second object table.

4. (Amended) Apparatus according to claim 2[ or 3], wherein said illuminating means is arranged to emit said measurement beam along an incident path substantially perpendicular to and spaced from said diffraction grating, and said light guide comprises a plurality of reflectors mounted to said second object table behind said diffraction grating relative to said [illuminating means] illuminator and positioned to reflect said measurement

beam onto a return path parallel to said incident path and passing through said diffraction grating in a direction opposite to said incident path.

6. (Amended) Apparatus according to claim 1, [2 or 3,] wherein said [illuminating means] illuminator is arranged to emit said measurement beam along an incident path substantially perpendicular to said diffraction grating and passing therethrough, and said light guide comprises a retro-reflector mounted to said second object table behind said diffraction grating relative to said [illuminating means for reflecting] illuminator to reflect said measurement beam along a return path substantially parallel to said incident path and passing back through said diffraction grating.

9. (Amended) Apparatus according to claim 7[ or 8], wherein said plane-reflector is sized and positioned so as to reflect substantially only the zeroth diffraction order of the measurement beam diffracted by its first passage through said diffraction grating.

12. (Amended) Apparatus according to [any one of claims] claim 6 [to 11] further comprising an anti-reflection coating on at least one surface of said diffraction grating.

13. (Amended) Apparatus according to [any one of the preceding claims] claim 1 comprising a plurality of calibration systems for measuring displacements of said second object table with tilt about a plurality of axes.

14. (Amended) A method of calibrating a lithographic projection apparatus comprising:

[an illumination system for supplying a projection beam of radiation;

a first object table for holding patterning means capable of patterning the projection beam according to a desired pattern;

a second object table for holding a substrate having a surface to be exposed, such that, when held on the table, the said surface lies in a reference plane;

a projection system for imaging the patterned beam onto a target portion of the substrate; and

a positioning system for moving said second object table between an exposure position, at which said projection system can image said patterned beam onto said substrate, and a measurement position, said positioning system including electronic control means having parameters defining a rotation-invariant point of the second object table; the method comprising the steps of:]

measuring [the] a position of a reference point on [the] a surface of [the second] an object table for holding a substrate having a surface to be exposed at different tilts;

calculating [the] a distance between the surface of the [second] object table and a rotation-invariant point of the [second] object table; and

adjusting parameters of [said] an electronic controller [control means] included in [said] a positioning system for moving said object table between an exposure position and a measurement position so that said rotation-invariant point is at a predetermined vertical distance from the reference point [surface] of the [second] object table.

15. (Amended) A method of manufacturing a device using a lithographic projection apparatus comprising:

[an illumination system for supplying a projection beam of radiation;

a first object table for holding patterning means capable of patterning the projection beam according to a desired pattern;

a second object table for holding a substrate having a surface to be exposed, such that, when held on the table, the said surface lies in a reference plane;

a projection system for imaging the patterned beam onto a target portion of the substrate; the method comprising the steps of:]

providing a substrate provided with a radiation-sensitive layer and having target portions thereof to [said second] an object table;

providing a projection beam of radiation using [the] an illumination system;

using [said patterning means] a projection beam patterning structure to endow the projection beam with a pattern in its cross section; [and]

moving the [second] object table to an exposure position[, and];

projecting the patterned beam of radiation onto said target portions of the substrate; and

[characterized by the step of:]

detecting displacements of a reference point of said second object table at various angles of tilt when situated at said measurement position.

16. (Amended) A device manufactured according to the method of claim 15 [16].